

Developing Bots

An introduction

Agenda

- Who are we
- What is a bot
- When to write a bot, and alternatives
- Pywikibot
 - Python
 - PAWS & Pywikibot introduction
- Considerations when writing a bot

Who are we

- What is your name?
- Are you an editor?
- Do you know how to program? Python?
- Do you run/develop any tools?
- What do you want to learn about?

What is a bot

Useful resource! 👉

https://en.wikipedia.org/wiki/Help:Creating_a_bot

What is a bot

Robots (bots) are **automatic processes** that interact with Wikimedia projects as if they were human editors.

What is a bot

Bots can automate tasks
and perform them **much faster** than humans.

What is a bot

For example, if you have a simple task that you need to perform **lots of times**.

What is a bot

Like adding a template
to all pages in a category with 1000 pages.

Making a bot

Creating bots requires at least some prior programming experience.

Making a bot

- Using a command line
- Programming language
- SSH & Linux

Making a bot

All of this can be learnt
with time and effort 🤖

When to write a bot, and alternatives

Disclaimer:

Maybe you don't really need to write a bot.

When to write a bot, and alternatives

It is often simpler to request a bot job from an existing bot.

When to write a bot, and alternatives

If you have only periodic requests
or are uncomfortable with programming,
request a bot job from an existing bot.

When to write a bot, and alternatives

Useful bots:

https://meta.wikimedia.org/wiki/Small_wiki_toolkits/Starter_kit/Bots_and_Tools#Bots

When to write a bot, and alternatives

There also are a number of tools available to anyone.

When to write a bot, and alternatives

For example, **AutoWikiBrowser** (*AWB*).

<https://en.wikipedia.org/wiki/Wikipedia:AutoWikiBrowser>

When to write a bot, and alternatives

Other editing tools:

https://en.wikipedia.org/wiki/Wikipedia:Tools/Editing_tools

Making a bot

There are a number of standard bot frameworks available.

The most popular and common is:

Pywikibot

Also known as PWB

<https://www.mediawiki.org/wiki/Manual:Pywikibot>

Pywikibot

Written in Python

<https://python.org>

```
print("Hello, I'm Python!")  
#> Hello, I'm Python!
```

```
1 / 2
#> 0.5
2 ** 3
#> 8
17 / 3
#> 5.666666666666667
17 // 3 # floor division
#> 5
```

```
fruits = ['Banana', 'Apple', 'Lime']  
loud_fruits = [fruit.upper() for fruit in fruits]  
print(loud_fruits)  
#> ['BANANA', 'APPLE', 'LIME']
```

```
numbers = [2, 4, 6, 8]
product = 1
for number in numbers:
    product = product * number

print('The product is:', product)
#> The product is: 384
```


Python

Great resource and cheatsheet 🙌

<https://learnxinyminutes.com/docs/python/>

Pywikibot

Community and support:

- #pywikibot IRC channel (freenode)
 - pywikibot@lists.wikimedia.org
 - <https://lists.wikimedia.org/mailman/listinfo/pywikibot>
- <https://www.mediawiki.org/wiki/Manual:Pywikibot/Communication>

Pywikibot

Installing Pywikibot

<https://www.mediawiki.org/wiki/Manual:Pywikibot/Installation>

Pywikibot

Easiest way to get running with Pywikibot:

PAWS

- <https://wikitech.wikimedia.org/wiki/PAWS>
- <https://www.mediawiki.org/wiki/Manual:Pywikibot/PAWS>

Pywikibot

Running the available scripts from the command line:

- <https://www.mediawiki.org/wiki/Manual:Pywikibot/Scripts>
- <https://phabricator.wikimedia.org/diffusion/PWBC/>

Pywikibot

Developing bots with Python. Reference:

- <https://doc.wikimedia.org/pywikibot/>
- <https://phabricator.wikimedia.org/diffusion/PWBC/>

Pywikibot

Running a bot on Toolforge:

<https://wikitech.wikimedia.org/wiki/Help:Toolforge/Pywikibot>

Considerations

when writing a bot

Considerations

Will it be manually assisted
or fully automated?

Considerations

Alone, or
with the help of other programmers?

Considerations

Will the bot's requests, edits, or other actions be **logged**?

If so, on **local media**, or on **wiki pages**?

Considerations

How will it be written and run?

On a web browser, or standalone?

Which programming language or framework will it use?

Considerations

If the bot is a standalone program,
will it run on your **local computer**,
or on a **remote server**?

Considerations

If the bot runs on a remote server,
will other editors be able to **operate** the bot,
start it, or **stop** it?

FIN

Questions? Comments?